SEQUENCE LISTING

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Ezrin, Alan M.
Holmes, Darren L.
Leblanc, Anouk
St. Pierre, Serge

<120> LONG LASTING SYNTHETIC GLUCAGON LIKE PEPTIDE (GLP-1)

<130> 500862001602

<140> 10/723,099
<141> 2003-11-25

<150> 09/657,332
<151> 2000-09-07

<150> 60/159,783
<151> 1999-10-15

<150> 60/134,406
<151> 1999-05-17

<160> 35

<170> PatentIn Ver. 2.1

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<220>
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His Asp Glu Phe Glu Arg His Ala Glu Gly Thr Phe Thr Ser Asp Val
1 5 10 15

Ser Ser Tyr Leu Glu Gly Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu
20 25 30

Val Lys Gly Arg Gly
35

<210> 2
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Peptide

<400> 2
His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg Gly
20 25 30

<210> 3
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<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Peptide

<221> Misc_Feature
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<223> Xaa represents Lys or Arg

<400> 3
Ser Tyr Leu Glu Gly Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val
1 5 10 15

Xaa Gly Arg Xaa Gly Arg
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<210> 4
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<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Peptide

<400> 4
Ser Asp Val Ser
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<210> 5
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<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Peptide

<400> 5
Thr Ser Asp Val Ser
1 5

<210> 6
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<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Peptide

<400> 6
Phe Thr Ser Asp Val Ser
1 5

<210> 7
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<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Peptide

<400> 7
Thr Phe Thr Ser Asp Val Ser
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<210> 8

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<220>
<223> Description of Artificial Sequence: Synthetic
Peptide

<400> 8
Gly Thr Phe Thr Ser Asp Val Ser
1 5

<210> 9
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<220>
<223> Description of Artificial Sequence: Synthetic
Peptide

<400> 9
Glu Gly Thr Phe Thr Ser Asp Val Ser
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<210> 10
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<220>
<223> Description of Artificial Sequence: Synthetic
Peptide

<400> 10
Ala Glu Gly Thr Phe Thr Ser Asp Val Ser
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<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

Peptide

<400> 11
His Ser Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 12
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Peptide

<400> 12
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 13
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<212> PRT
<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic
Peptide

<400> 13
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Tyr
20 25 30

<210> 14
<211> 31
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<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic
Peptide

<400> 14
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Tyr
20 25 30

<210> 15
<211> 31
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Peptide

<400> 15
Asp Leu Ser Lys Gln Met Glu Glu Glu Ala Val Arg Leu Met Ile Glu
1 5 10 15

Trp Leu Lys Asn Gly Gly Pro Ser Ser Gly Ala Pro Pro Pro Ser
20 25 30

<210> 16
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Peptide

<400> 16
His Asp Glu Phe Glu Arg His Ala Glu Gly Thr Phe Thr Ser Asp Val
1 5 10 15

Ser Ser Tyr Leu Glu Gly Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu
20 25 30

Val Lys Gly Arg Lys
35

<210> 17
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<212> PRT
<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic
Peptide

<400> 17
His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg Lys
20 25 30

<210> 18
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<223> Description of Artificial Sequence: Synthetic
Peptide

<400> 18
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 19
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<223> Description of Artificial Sequence: Synthetic
Peptide

<400> 19
His Ser Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 20
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
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Peptide

<400> 20
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Glu Met Glu Glu
1 5 10 15

Glu Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Tyr
20 25 30

<210> 21
<211> 30
<212> PRT
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<220>
<223> Description of Artificial Sequence: Synthetic
Peptide

<400> 21
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Glu Met Glu Glu
1 5 10 15

Glu Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Tyr

20 25 30

<210> 22
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Peptide

<400> 22
Asp Leu Ser Lys Gln Met Glu Glu Glu Ala Val Arg Leu Phe Ile Glu
1 5 10 15

Trp Leu Lys Gly Gly Pro Ser Ser Gly Pro Pro Pro Ser
20 25

<210> 23
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Peptide

<221> MOD_RES
<222> 31
<223> Xaa represents Tyr-amide

<400> 23
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa
20 25 30

<210> 24
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Peptide

<221> MOD_RES

<222> 31
<223> Xaa represents Ser-amide

<400> 24
Asp Leu Ser Lys Gln Met Glu Glu Glu Ala Val Arg Leu Phe Ile Glu
1 5 10 15
Trp Leu Lys Asn Gly Gly Pro Ser Ser Gly Ala Pro Pro Pro Xaa
20 25 30

<210> 25
<211> 37
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<220>
<223> Description of Artificial Sequence: Synthetic
Peptide

<221> MOD_RES
<222> 37
<223> Xaa represents Lys(E-MPA)-NH2-5TFA and where "E" represents Epsilon

<400> 25
His Asp Glu Phe Glu Arg His Ala Glu Gly Thr Phe Thr Ser Asp Val
1 5 10 15
Ser Ser Tyr Leu Glu Gly Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu
20 25 30
Val Lys Gly Arg Xaa
35

<210> 26
<211> 37
<212> PRT
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<220>
<223> Description of Artificial Sequence: Synthetic
Peptide

<221> MOD_RES
<222> 37
<223> Xaa represents Lys(E-AEEA-AEEA-MPA)-NH2-5TFA and where "E"
represents Epsilon

<400> 26
His Asp Glu Phe Glu Arg His Ala Glu Gly Thr Phe Thr Ser Asp Val
1 5 10 15

Ser Ser Tyr Leu Glu Gly Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu
20 25 30
Val Lys Gly Arg Xaa
35

<210> 27
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<223> Description of Artificial Sequence: Synthetic
Peptide

<221> MOD_RES
<222> 31
<223> Xaa represents Lys(E-MPA)-NH2-4TFA and where "E" represents Epsilon

<400> 27
His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg Xaa
20 25 30

<210> 28
<211> 31
<212> PRT
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<220>
<223> Description of Artificial Sequence: Synthetic
Peptide

<221> MOD_RES
<222> 31
<223> Xaa represents Lys(E-AEEA-AEEA-MPA)-NH2-4TFA and where "E"
represents Epsilon

<400> 28
His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg Xaa
20 25 30

<210> 29

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<221> MOD_RES
<222> 2
<223> Xaa represents D-Ala

<221> MOD_RES
<222> 31
<223> Xaa represents Lys(E-MPA)-NHH2-4TFA and where "E" represents Epsilon

<400> 29
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg Xaa
20 25 30

<210> 30
<211> 31
<212> PRT
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<220>
<223> Description of Artificial Sequence: Synthetic
Peptide

<221> MOD_RES
<222> 2
<223> Xaa represents D-Ala

<221> MOD_RES
<222> 31
<223> Xaa represents Lys(E-AEEA-AEEA-MPA)-NH2-4TFA and where "E"
represents Epsilon

<400> 30
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg Xaa
20 25 30

<210> 31
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<212> PRT
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Peptide

<221> MOD_RES
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<223> Xaa represents Lys(E-MPA)-NH2-5TFA and where "E" represents Epsilon

<400> 31
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Xaa
35 40

<210> 32
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<212> PRT
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<223> Description of Artificial Sequence: Synthetic
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<222> 40
<223> Xaa represents Lys(E-AEEA-AEEA-MPA)-NH2-5TFA and where "E"
represents Epsilon

<400> 32
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Xaa
35 40

<210> 33
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<223> Description of Artificial Sequence: Synthetic
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<221> MOD_RES
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<223> Xaa represents Lys(E-MPA)-NH2-5TFA and where "E" represents Epsilon

<400> 33
His Ser Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Xaa
35 40

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<221> MOD_RES
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<223> Xaa represents Lys(E-AEEA-AEEA-MPA)-NH2-5TFA and where "E"
represents Epsilon

<400> 34
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Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Xaa
35 40

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<221> MOD_RES
<222> 32
<223> Xaa represents Tyr-amide

<400> 35
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Xaa
20 25 30